

REMARKS

Claims 1 to 6 are present for prosecution.

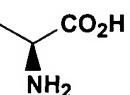
Reconsideration of the rejection of this application is respectfully requested in view of the above amendments and the following remarks.

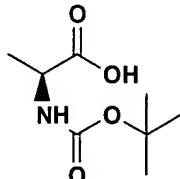
Claim 1 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner maintains that in Claim 1, “the group $-C-NR^7R^8COR^4$ in the definition for the variable R^2 has too many bonds attached to the nitrogen atom.”

The group $-C-NR^7R^8COR^4$ is missing parentheses should have read $-C(NR^7R^8)COR^4$ or

$$\begin{array}{c} H \\ | \\ —C—COR^4 \\ | \\ NR^7R^8 \end{array}$$
. Claim 1 has been amended to clarify the objected to group so that it now reads

$$\begin{array}{c} H \\ | \\ —C—COR^4 \\ | \\ NR^7R^8 \end{array}$$
. Basis for the above amendment can be found in Claim 4, formula V which includes

the R^2 group  and Claim 5, formula VI which includes the R^2 group



These groups are examples of R^2 groups which would be generally represented by the formula

$$\begin{array}{c} H \\ | \\ —C—COR^4 \\ | \\ NR^7R^8 \end{array}$$
. Accordingly, it would be clear to one skilled in the art reading Applicants’

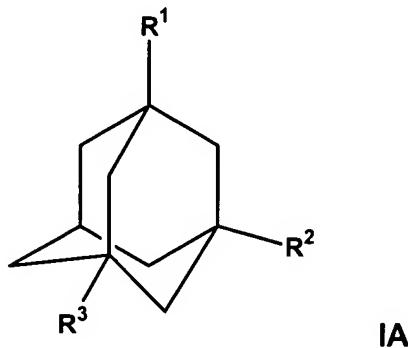
application that $-C-NR^7R^8COR^4$ is, in fact, $\begin{array}{c} H \\ | \\ —C—COR^4 \\ | \\ NR^7R^8 \end{array}$ or $-C(NR^7R^8)COR^4$.

Claims 1 to 8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner objects to the terms “comprising” and “comprises” found in Claims 1 to 8. The objected to terms have been deleted from the claims.

In view of the foregoing, it is submitted that Claims 1 to 6 as present and amended are in compliance with 35 U.S.C. §112, second paragraph. Claim 1 has also been amended to define R¹ as OH and to delete H.

Claims 7 and 8 have been combined with Claim 6.

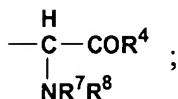
Applicants' invention as now claimed in Claim 1 is defined as a compound having the structure of Formula IA:



or a pharmaceutically acceptable salt thereof, wherein

R¹ is OH;

R² is selected from the group consisting of -C(=O)-COR⁴, -C(=O)NR⁵R⁶-, C(X)_n-COR⁴ and



wherein

X is a halogen;

n is from 1-2

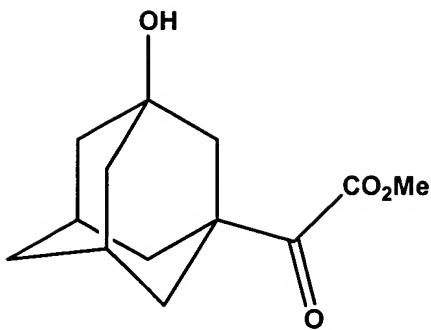
R⁴ is selected from the group consisting of O-alkyl, NH₂ and OH; and

R⁵, R⁶, R⁷ and R⁸ are each selected from the group consisting of H and COOR⁹,

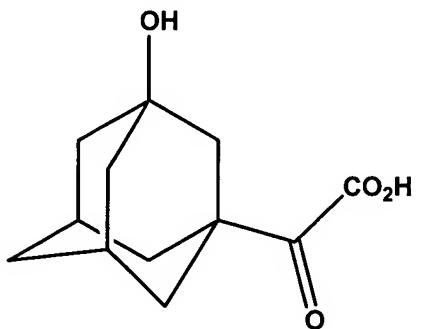
wherein R⁹ is a substituted or unsubstituted alkyl; and

R³ is selected from the group consisting of H or OH.

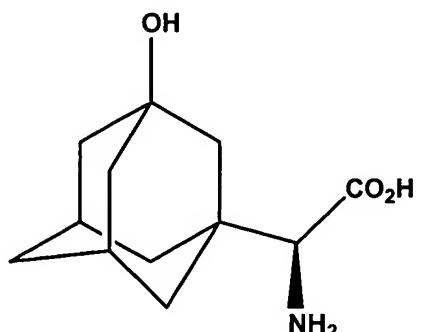
In Claim 2, the compound is defined as Formula I,



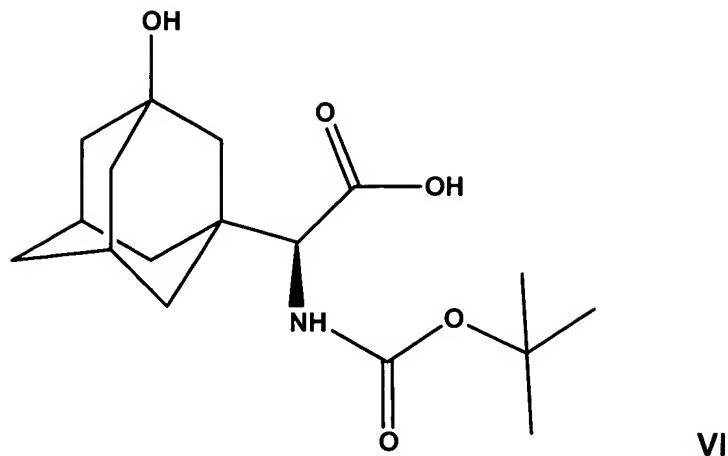
In Claim 3, the compound is defined as Formula II,



In Claim 4, the compound is defined as Formula V,

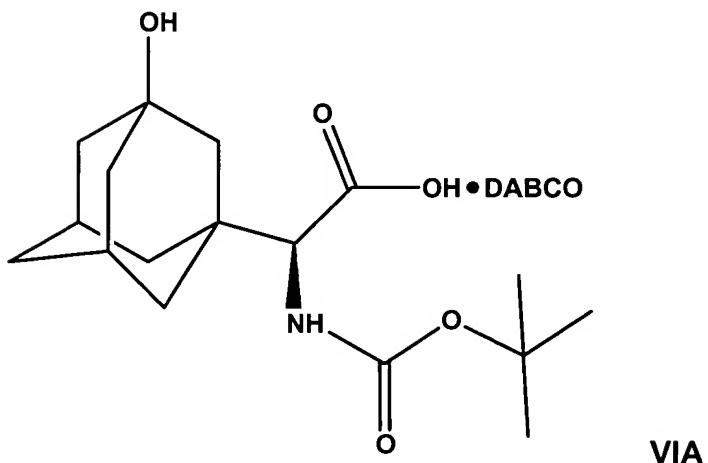


In Claim 5, the compound is defined as Formula VI,



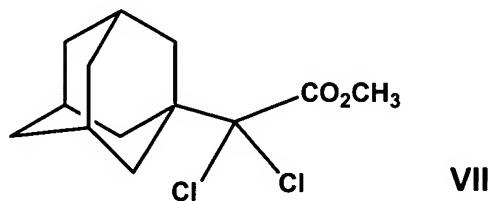
VI

or its DABCO salt VIA



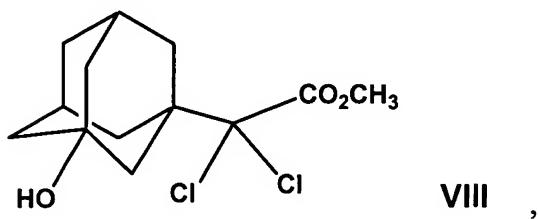
VIA

In Claim 6, the compound is defined as Formula VII,



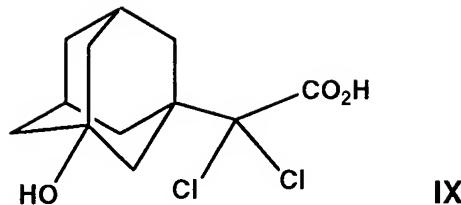
VII

or defined as Formula VIII,



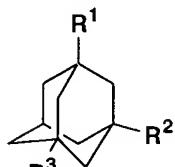
VIII

or defined as Formula IX,



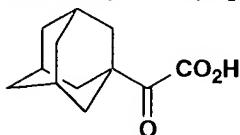
Claims 1 to 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Hermann et al. (US 3,325,478, 1964). The Examiner maintains that:

“The instant invention claims a genus compound with the structure



wherein R¹ is H or OH; R² is -C(=O)-COR⁴, -C(=O)NR⁵R⁶, -C(X)_n-COR⁴ and -C-NR⁷R⁸COR⁴; X is a halogen; n is from 1-2; R⁴ is O-alkyl, NH², and OH; R⁵-R⁸ are H or COOR⁹; R⁹ is a substituted or unsubstituted alkyl; and R³ is H or OH.”

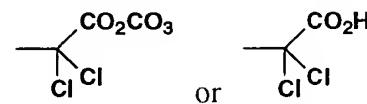
The *Hermann, et al.* reference teaches the synthesis of α -amino-1-adamantylmethyl penicillins and uses the following species with the structure



as an intermediate. This species anticipates the genus compound of claim 1 of the instant invention (see page 2, column 3, line 75.)”

Please note that Claim 1 has been amended to define R¹ as OH. Claims 2 to 5 define compounds where R¹ is OH.

There is no disclosure or suggestion in Hermann et al. of compounds which include an adamantyl ring which includes an OH substituent. Hermann et al. only discloses 1-adamantane glyoxalic acid. Hermann et al. does not disclose or suggest adamantane compounds which include an OH on the adamantyl ring.



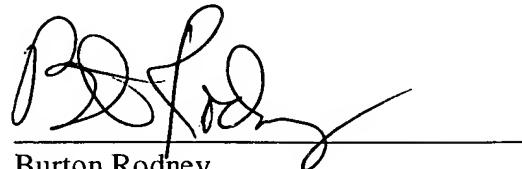
Claim 6 defines compounds which include the side chain

There is no disclosure or suggestion in Hermann et al. of compounds as defined in Claim 6.

In view of the foregoing, it is submitted that Applicants' compounds as claimed in Claims 1 to 6 as amended are not anticipated by Hermann et al. and are patentable over Hermann et al. It is also believed that Claims 1 to 6 as amended are in compliance with 35 U.S.C. §112.

Accordingly, it is believed that Claims 1 to 6 are in condition for allowance.

Respectfully submitted,



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